

LSRU SERIES

Load sensor



Description

The LSRU Series is a microcontroller-based family of load sensors. The LSRU family of products employ three basic types of control logic: motor control logic, alarm logic and feed control logic.

Motor Control Logic

Several combinations of functions are available in the LSRU, including overcurrent and undercurrent or either overcurrent or undercurrent with variable trip, restart or extended restart delay settings. These various versions of the LSRU trip on the respective fault and then automatically reset after the restart delay expires, in preparation for the next motor start. LSRUs do not trip on undercurrent when the load turns off, this is recognized as a normal condition.

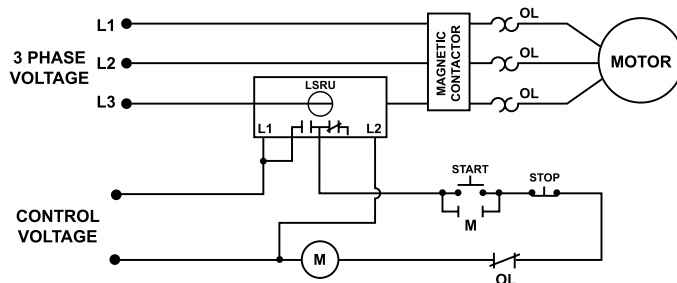
Alarm Logic

The LSRU-AL simply indicates whether the current is between the setpoints or outside of the setpoints. This product is best used with a PLC or other controller where status indication is desired.

Feed Control

The LSRU-FC is a load monitor intended to control feeder mechanisms in a variety of applications. It stops the feeder when the grinder, chipper, saw, auger, etc. nears overload. When the load is reduced to a preset level, the feeder is restarted.

Wiring Diagram



Ordering Information

See next page.

Features & Benefits

FEATURES	BENEFITS
LED indicator	Visual indication of relay status
Built in current sensor	Eliminates the need for a stand alone current transformer and also provides isolation between the monitored and control circuits
Adjustable current sensing range	Provides ability to precisely set the current trip point for any application

LSRU SERIES

Ordering Information

MODEL	LINE VOTAGE	CURRENT RANGE	DESCRIPTION
LSRU-024-AL-2	24VAC	5-25A	Alarm logic
LSRU-024-AL-3	24VAC	25-100A	Alarm logic
LSRU-115-AL-1.5	115VAC	0-10A	Alarm logic
LSRU-115-AL-2	115VAC	5-25A	Alarm logic
LSRU-115-AL-3	115VAC	25-100A	Alarm logic
LSRU-115-FC-1.5	115VAC	0-10A	Feed control logic
LSRU-115-OT-1.5	115VAC	0-10A	Motor control logic with overcurrent trip, adj trip delay (0.5-60s)
LSRU-115-OT-2	115VAC	5-25A	Motor control logic with overcurrent trip, adj trip delay (0.5-60s)
LSRU-115-OT-3	115VAC	25-100A	Motor control logic with overcurrent trip, adj trip delay (0.5-60s)
LSRU-115-OR-1.5	115VAC	0-10A	Motor control logic with overcurrent trip, adj restart delay (0.5-300s, manual)
LSRU-115-OR-2	115VAC	5-25A	Motor control logic with overcurrent trip, adj restart delay (0.5-300s, manual)
LSRU-115-UE-2	115VAC	5-25A	Motor control logic with undercurrent trip, adj ext restart delay (2-300m, manual)
LSRU-115-UT-2	115VAC	5-25A	Motor control logic with undercurrent trip, adj trip delay (0.5-60s)
LSRU-115-UT-3	115VAC	25-100A	Motor control logic with undercurrent trip, adj trip delay (0.5-60s)
LSRU-115-UR-2	115VAC	5-25A	Motor control logic with undercurrent trip, adj restart delay (0.5-300s, manual)
LSRU-115-OU-1.5	115VAC	0-10A	Motor control logic with overcurrent and undercurrent trip
LSRU-115-OU-2	115VAC	5-25A	Motor control logic with overcurrent and undercurrent trip
LSRU-115-OU-3	115VAC	25-100A	Motor control logic with overcurrent and undercurrent trip

PART # KEY

O = Overcurrent Trip

U = Undercurrent Trip

T = Adj. Trip Delay (0.5-60 seconds)

R = Adj. Restart Delay (0.5-300 seconds, Manual)

E = Adj. Extended Restart Delay (2-300 minutes, Manual)

1.5 = 0-10 Amps

2 = 5-25 Amps

3 = 25-100 Amps

Specifications

Functional Characteristics

Isolation 600VAC rms

Power 2 Watts

Motor Acceleration Time 2 seconds

When not selected as

an option:

Fixed Trip Delay 0.5 second

(-AL, -FC) 1 second

Fixed Restart Delay 1 second

(-AL only) as soon as current is within limits

(-FC only) 0.5 second

Input Characteristics

Control Power 24VAC or 115VAC

Output Characteristics

Output Contact Rating (SPDT)

Pilot Duty 480VA @ 240VAC

General Purpose 10A @ 240VAC

General Characteristics

Temperature Range -40° to 70°C (-40° to 158°F)

Wire Size #12-24AWG

Hole Size 0.725" diameter

Terminal Torque 7 in.-lbs.

Safety Marks

CSA, CSA-NRTL/C (File #46510)

CE

Dimensions **H** 42.42 mm (1.67"); **W** 58.42 mm (2.3");

D 90.43 mm (3.56")

Weight 0.5 lb. (8 oz., 226.8 g)

Mounting Method Four #6 screws 3/4" in length

Caution: This product should not be relied upon solely for safety of life or safety applications.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Littelfuse:

[LSRU-115-FC-1.5](#) [LSRU-024-AL-3](#) [LSRU-115-AL-2](#) [LSRU-115-UT-2](#) [LSRU-115-UT-3](#) [LSRU-115-OR-1.5](#) [LSRU-115-OU-2](#) [LSRU-024-AL-2](#) [LSRU-115-OT-1.5](#) [LSRU-115-AL](#) [LSRU-115-OU-1.5](#) [LSRU-115-UE-2](#) [LSRU-115-OU-3](#) [LSRU-115-AL-3](#) [LSRU-115-OT-2](#) [LSRU-115-OT-3](#) [LSRU-115-UR-2](#) [LSRU-115-OR-2](#) [LSRU-115-AL 1.5](#)